

We claim:

- 1 1. A method of format detection for information received over a communication  
2 system, the method comprising the step of:  
3 determining the format of the received information by decoding received  
4 information extracted from a defined guiding channel whereby information size values  
5 obtained from a defined list of size values for the guiding channel is used in the  
6 decoding.
- 1 2. The method of claim 1 where the step of determining the format comprises the  
2 steps of:  
3 providing a lookup table to store the information size values of the guiding  
4 channel and corresponding information size values of other channels of the  
5 communication system;  
6 extracting received information from the other communication channels;  
7 performing decoding operations on the extracted guiding channel information M  
8 times where M is an integer that represents a total number of information size values  
9 stored in the list;  
10 deciding which of the M decoding operations resulted in a correct decode; and  
11 determining the format of the received information from the information size  
12 value of the guiding channel that yielded the correct decode.
- 1 3. The method of claim 2 where the step of deciding which of the M decoding  
2 operations resulted in a correct decode comprises the steps of:  
3 performing at least one decode operation on the extracted guiding channel  
4 information yielding at least one decode result; and  
5 applying the at least one decode result to an algorithm for deciding whether  
6 there is a correct decode and which information size value yielded such correct  
7 decode.
- 1 4. The method of claim 3 where the communication system is a 3GPP compliant  
2 UMTS where the guiding channel is TrCh1 and the decoding operations comprise

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8. The method of claim 6 where a BTFD failure is declared when any one of the following sets of values or conditions occur from at least one of the M decoding operations:

- (a) none of the M decoding operations yielded either a CRC pass or a tail bit test pass result;
- (b) none of the M decoding operations yielded a CRC pass, but more than one passed the tail bit test and none of these satisfy the condition  $T_i = T_0$  condition;
- (c) none of the M decoding operations yielded a CRC pass but more than one passed the tail bit test, and of these, more than one decoding operation yielded the values  $C_i = 0$ ;  $K_i = 1$ ;  $T_i = T_0$ ;
- (d) none of the M decoding operations yielded a CRC pass, but more than one passed the tail bit test, and of these, more than one yielded values of  $C_i = 0$ ;  $K_i = 1$ ;  $T_i < T_0$ ;
- (e) more than one of the M decoding operations yielded a CRC pass, but none passed the tail bit test, and of these, none satisfy the condition  $T_i = T_0 + 1$ ;
- (f) more than one of the M decoding operations yielded a CRC pass, but none passed the tail bit test, and of these, more than one yielded the values  $C_i = 1$ ;  $K_i = 1$ ;  $T_i = T_0 + 1$ ;
- (g) more than one of the M decoding operations yielded values of  $C_i = 1$ ;  $K_i = 1$ ;  $T_i < T_0$ ;
- (h) more than one of the decoding operations yielded a CRC pass and a tail bit pass result, and of these, none satisfy the conditions  $T_i < T_0$  or  $T_i = T_0$ ; and
- (i) more than one of the decoding operations yielded a CRC pass and a tail bit test pass result, and of these, more than one yielded values of  $C_i = 1$ ;  $K_i = 1$ ;  $T_i = T_0$ .